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WAS THE IMPACT OF THE COVID-19 PANDEMIC IN AFRICA UNDERESTIMATED?

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ABSTRACT:
The COVID-19 pandemic, caused by the novel coronavirus SARS-CoV-2, has had a profound impact on the world. At the time of writing this article, almost 760 million cases have been confirmed globally with over 6.5 million deaths recorded. Africa had lower numbers of confirmed cases and deaths as compared to other regions despite initial fears of the devastating effect that the pandemic would have on the vulnerable continent. Many theories exist to explain why this was so. However, low testing rates, amidst other factors, have raised concerns about the possible underestimation of the impact of the Covid-19 pandemic in Africa.

Keywords: Africa, COVID-19, Impact, Pandemic, Underestimated

INTRODUCTION:

The COVID-19 pandemic, caused by the novel coronavirus SARS-CoV-2, has had a profound impact on the world. Since the first case was reported in Wuhan, China in December 2019, the virus has spread rapidly and has affected millions of people worldwide [1]. According to the World Health Organization (WHO), as of 7th March 2023, there have been a cumulative 759,408,703 confirmed cases of COVID-19, including 6,866,434 deaths reported, and 13,229,471,213 vaccine doses administered globally [2]. Over 58,000 cases were reported between the 6th and 7th of March 2023 giving an average of about 41 infections every minute globally [2].

In Africa, the first case of COVID-19 was reported in Egypt in February 2020, and since then, the virus has spread to all the countries on the continent [3]. The continent currently (March 2023) has over 9.5 million confirmed cases with the highest number of cases (288,277 confirmed

cases) reported between December 20 and 27, 2021 [2]. While many developed countries have been able to respond quickly to the pandemic with vaccine rollouts and healthcare infrastructure, the situation in Africa has been more challenging [4]. Despite early predictions that Africa would be hit hard by the pandemic due to its weak healthcare systems and high burden of communicable diseases among other things, the continent has reported lower numbers of cases and deaths compared to other regions [4]. However, there are concerns that the impact of COVID-19 on Africa may have been underestimated.

VULNERABILITY OF THE AFRICAN CONTINENT AND THE IMPACT OF COVID-19**:**

Africa is one of the most vulnerable continents in the world, with many countries facing significant economic, political, and social challenges. Healthcare in Africa is plagued by a plethora of challenges, which include but are not limited to lack of funds, rampant government corruption, poor infrastructure, poverty, medical brain drains, and epidemics of infectious diseases such as cholera, Ebola, and Lassa fever. In a study done to sample healthcare quality in African nations [5], various threats to good public healthcare were identified. These included a low ratio of doctors to the populace, quoted as 1 per 2,000 people in Nigeria, as well as a small contribution of GDP to healthcare which is currently about 8 percent in Nigeria (₦1.58 trillion out of a total budget of ₦20.51 trillion) [6]. The situation is not any better in South Africa with an expenditure of about 9.1 percent of its entire budget on healthcare as of 2019, a poor doctor-to-patient ratio as well as having poorly equipped public health facilities that are overcrowded and have long waiting times. The story is similar in Kenya, Zambia, Tanzania, and Uganda with a low budget for healthcare, few doctors available for the population as well as a significant difference in the type of care offered across the countries.

The African continent has long struggled with infectious diseases including malaria, tuberculosis, and human immunodeficiency infection/acquired immune deficiency syndrome (HIV/AIDS) [7]. These diseases have already placed a significant burden on the continent's health systems and have contributed to high levels of poverty and inequality [7]. The African health system is also characterized by limited access to essential health services, medical supplies, and trained healthcare workers [4]. These factors make Africa particularly vulnerable to the impact of COVID-19. The COVID-19 pandemic further posed a significant challenge to Africa's health systems, which are already overstretched and under-resourced. In terms of infrastructure, Africa has the weakest, with an average of only 1.8 hospital beds per 1,000 people, which is

significantly lower than the global average of 2.7 beds per 1,000 people [8].

Another major factor that can increase Africa's vulnerability to COVID-19 is the low proportion of the population that has been vaccinated. The proportion of the population in Africa that has been fully vaccinated against COVID-19 is only 29.9% [9], which is significantly lower than in other regions. This low vaccination rate is due to a variety of factors, including vaccine hesitancy, limited vaccine supply, and challenges with vaccine distribution and administration. The low vaccination rate in Africa is concerning, as it increases the risk of new variants emerging and spreading, which could lead to a resurgence of the pandemic. Therefore, it is crucial that efforts are made to increase vaccine supply and distribution in Africa, and address vaccine hesitancy and misinformation.

Poverty is a big contributor to the vulnerability of Africa to COVID-19. Many people in Africa live in overcrowded conditions, making it difficult to practice social distancing and other preventive measures. A large proportion of the population relies on the informal sector for their livelihoods, making it difficult to comply with lockdown measures and other restrictions that may affect their ability to earn an income. Despite all these challenges, the situation report by the WHO on COVID-19 in the WHO African region as of 5 March 2023 showed a 61 percent decrease in reported cases compared to what was obtainable in January and February of 2023 [10]. A total number of 47 countries in Africa are said to have been affected with a cumulative number of cases of about 8.96 million unlike 191 million, 274 million, and 760 million cases seen in the American, Europe, and South East Asia regions respectively [10]. About 175,000 deaths in Africa were documented around the same period, which is extremely low compared to about 2.94 million, 2.2 million, and 6.9 million cases reported individually in the Americas, Europe, and South East Asia [10].

Although the morbidity and mortality rates reported were low, the pandemic has had a significant impact on Africa's economies, with many countries experiencing a decline in economic activity and job losses. The pandemic has disrupted global supply chains and reduced demand for African exports, leading to a decline in trade and investment. The economic impact of the pandemic is expected to be felt for years to come, with many African countries facing the risk of debt distress. The pandemic has pushed 39 million people into extreme poverty in Africa [11]. The economic impact of the pandemic is likely to linger for a long time, and it may take years for African countries to recover.

The COVID-19 pandemic had a psychological impact on individuals and communities as well. The pandemic has led to fear, anxiety, and stress,

and has exacerbated existing mental health conditions [12]. In Africa, the pandemic has led to increased social isolation, which has affected the mental health of individuals and communities. It has led to increased stigmatization and discrimination against certain groups, such as healthcare workers, which has further worsened the psychological impacts [12].

The effect of the COVID-19 pandemic on Africa's social structures, including education, gender equality, and poverty reduction cannot be trivialized. The closure of schools has disrupted the education of millions of African children, with long-term consequences on their future prospects. Globally, about 1.5 billion children were out of school during the pandemic [13].

Mobile networks do not serve about 56 million students in sub-Saharan Africa, which was a major limitation to the use of online learning as an alternative method for learning in educational institutions further worsening the disruption in education [14].

The pandemic has worsened gender inequalities in Africa, with women being disproportionately affected by job losses and increased care responsibilities. It has also increased the risk of poverty in Africa, with many households losing their sources of income and struggling to meet their basic needs [15].

POSSIBLE LOGIC BEHIND THE LOW IMPACTS REPORTED IN AFRICA:

Generally, the vulnerability of the health system in Africa makes one wonder if the impact of COVID-19 was underestimated and under-reported. In a report that attempted to answer the puzzling question of why the obvious was not seen or reported in Africa during the pandemic, a number of points were raised. One would naturally expect the transmission and spread of COVID-19 to be favored by large populations but instead, Africa ended up with a phenomenon called the “African Paradox”. This phenomenon has been described by several theories trying to explain why the impact of the SARS-Cov-2 virus seemed to be less in African countries. Such theories include that of herd immunity and a preponderance of a young population in Africa. Experience gained during previous public health crises such as the Ebola outbreak may also have allowed African public health agencies to contain the spread of the SARS-Cov-2 virus more effectively than expected. However, there could also be another more glaring reason for why this paradox may have occurred, which is easily explained by challenges of insufficient data, low testing, poor disease surveillance system, and a generally poor healthcare system [16].

The impact of COVID-19 on Africa may have been underestimated due to the low testing rates in

many African countries compared to other countries outside the continent (Table 1). Reunion is the country with the highest testing capacity in Africa with about 1.8 million tests per million population, which is still lower than that of many other countries across the globe like the United Arab Emirate, Bermuda, United States of America, Austria, Chile, Tonga, and Australia among others (Table 1).

Table 1: Countries with the highest and lowest testing capacities in each continent of the world

Continents (Countries)	Testing per million population	Total Test	Cases per million population	Total Cases	Death per million population	Total Death
Africa						
Reunion*	1,766,027	1,603,660	535,854	486,588	1,014	921
South Africa	441,027	26,795,090	66,961	4,068,319	1,689	102,595
Nigeria	26,339	5,708,974	1,230	266,628	15	3,155
Algeria#	5,091	230,861	5,988	271,539	152	6,881
Asia						
United Arab Emirate*	19,787,984	199,498,197	104,546	1,054,008	233	2,349
Syria#	7,553	146,269	2,968	57,478	163	3,164
Europe						
Austria*	23,302,116	211,273,524	660,293	5,986,689	2,428	22,014
Bosnia and Herzegovina#	580,036	1,884,721	123,692	401,914	5,013	16,289
North America						
Bermuda*	16,607,372	1,028,644	304,106	18,836	2,599	161
United States of America	3,493,121	1,169,515,288	315,812	105,735,659	3,435	1,150,133
Haiti#	11,337	132,422	2,928	34,202	74	860
South America						
Chile*	2,529,035	48,684,419	270,855	5,214,020	3,342	64,333
Venezuela#	114,771	3,359,014	18,869	552,233	200	5,854
Oceania						
Tonga*	4,965,327	535,009	156,029	16,812	121	13
Australia	3,024,116	78,835,048	436,750	11,385,534	746	19,459
Papua New Guinea#	26,813	249,149	5,039	46,826	72	670

Country in the continent with the *highest and # lowest testing capacity per million
(Worldometer. 2023. Accessed 15/3/2023. https://www.worldometers.info/coronavirus/)

Since the pandemic started, 95 million COVID-19 tests had been conducted across the continent as of February 2022 [17], which is small compared to the population of over 1.3 billion people. Europe recorded the highest number of tests with more than 60 tests per thousand population while Africa had the lowest number of COVID-19 testing done (<10 per thousand population) [18]. This suggests that many cases may be going undetected, which could lead to the further spread of the virus increasing unreported morbidity and mortality.

In addition, many people in Africa treated their own illnesses by self-medicating or by visiting other non-modern healthcare institutions when

they became ill instead of seeking appropriate medical attention. This practice is due to factors relating to the weak healthcare system, cultural beliefs, and poor healthcare-seeking behavior. The practice of proper health-seeking behavior in Africa is generally poor among the population and healthcare workers are not left out of this trend with about one-third of them reporting self-medication as the first response to illness [19, 20]. The COVID-19 symptoms were similar to those of malaria and other common respiratory tract infections, which most people treated as such and recovered from; leaving aside the fact that many persons were asymptomatic and inadequately examined. Due to insufficient testing capacity and a shortage of necessary medical equipment, the full number of COVID-19 cases may still be undiscovered [21].

Initial speculation suggested that hot weather might have something to do with the lowest mortality rates on continents like Africa and Asia [22, 23]. However, Oceania and New Zealand showed the lowest mortality rates with chilly weather around June, refuting this [18]. Nonetheless, as the southern hemisphere entered winter, the virus's transmission in South Africa accelerated, but as the weather warmed up, the incidence of infections sharply decreased [24]. Researchers from the University of Maryland discovered this in a study they did, finding that the virus spreads more readily under lower temperatures and humidity levels but less readily in other circumstances [25].

The majority of African nations' young populations undoubtedly had a role to play. While in the rest of the world, most persons who passed away were older than 80 years, in Africa, the median age is only 19 years [23]. The young population in Africa is expected to be more susceptible to a pandemic since their immune systems are less established against infectious diseases but this was not the case with COVID-19 [26]. It was also noted that elderly people were kept in nursing homes in western nations, which increased the spread of COVID-19 while elderly people in Africa typically retire to rural regions, thereby preserving social distance from urban areas where the spread would have been more pronounced [24].

The inadequate transportation infrastructure and economic situation inside the nations in Africa have also served to be a gift in disguise because people do not travel as frequently as is done in other wealthy nations [24]. The majority of cases were recorded from nations with significant economies and substantial levels of international travel. The fewest cases were recorded by the Island nations, small landmass nations, and conflict-affected nations [27]. Comparatively little international travel occurs on the African continent [28]. The Republic of South Africa is ranked 22nd internationally and has the highest rate of international travel in Africa [28]. This suggests

that persons in Africa have a reduced chance of contracting travel-related diseases like COVID-19. According to the WHO Director General, Tedros Ghebreyesus, the reason why Africa has been able to control the COVID-19 pandemic is because its countries have accumulated a great deal of expertise from fighting diseases like polio, measles, Ebola, and many others. Moreover, Cyril Ramaphosa, the president of South Africa, should be commended for the African Union's quick response [29]. Another possibility is that the majority of Africans have some degree of immunity from numerous diseases such as malaria and other viral infections, which may have strengthened their herd immunity. Another factor might be that certain African countries have developed infrastructure and established protocols to deal with infectious disease outbreaks as a result of prior experience managing infectious disease epidemics [24].

Although there were few COVID-19 cases and fatalities reported in Africa, much remains to be studied. For example, most of the reported statistics were not divided by sex to understand sex disparities. Moreover, a select few nations, such as the United Republic of Tanzania, as well as a state in Nigeria- Kogi state initially did not see COVID-19 as a problem. It would therefore be intriguing to learn how this altered the pandemic's trajectory in their local populations [27]. Kogi state, Nigeria where the Government showed little political will for the pandemic and refused the Nigerian Centre for Disease Control from testing and carrying out other control activities reported zero cases and death from COVID-19 for a long time even at the peak of the pandemic in the country. Could this really be true? As time went on, Africa recorded the fewest instances and fatalities compared to North America, Europe, South America, and Asia [30]. Although there is not much information or research on COVID-19 in Africa, what is available may not actually provide a picture of how the disease is faring in the continent.

CONCLUSION:

There are so many theories supporting why Africa was the least affected continent by the COVID-19 pandemic in terms of morbidity and mortality. These include the preponderance of a young population, herd immunity, weather condition, and low international travel among others. Despite these, the vulnerability of the African continent could have accounted for a more serious impact than was reported. The underreporting and underestimation of these impacts could have been a result of low testing capacity, poor surveillance, poor data gathering as well as poor record-keeping. Africa needs to expand the scope of its health system, especially those dealing with emergency/epidemic response to be able to

identify, track, treat, and report cases of diseases better in future pandemics.

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